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Section I

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IN THIS ISSUE

A Cost Plan for the Women's Shoe Industry, by Clinton W. Bennett.... 677

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EDITORIAL DEPARTMENT NOTE

Recently we published a book review in which the author of a book on budgeting was taken to task because of his statement that "standard cost accounting involves an elaborate bookkeeping procedure which besides being expensive is in itself undesirable." While the author of the article presented in this Bulletin is not primarily concerned with the relative simplicity and inexpensiveness of standard costs, it is felt that his article is a most telling refutation of the charges that standard costs require an elaborate bookkeeping procedure and are expensive. Shoe manufacturing in an industry in which adequate and inexpensive cost accounting can be obtained without elaborate bookkeeping procedure only by the use of standard costs. Process costs are inapplicable and job costs, if complete, are too complicated and expensive. As the author points out "we are dealing with a business having a small clerical organization and a massed production volume that in its bulk is away out of proportion to the general size of a comparable business in most industries." It is interesting to note how well the situation can be handled through a simple application of standard costs.

The author of this article, "A Cost Plan for the Women's Shoe Industry," is Clinton W. Bennett, of our Boston Chapter. Mr. Bennett entered professional work in 1916 and his activities from that time until 1925 covered many phases of industry, commerce and finance. Then for several years he was General Manager of the Robert Mason Company of Pawtucket, R. I. He was for several years Supervising Cost Engineer with Cooley & Marvin of Boston, and is now Manager of the Cost Accounting Division of that firm.

Besides being a member of the N. A. C. A., Mr. Bennett is an Associate Member of the American Society of Mechanical Engineers, an Associate of the American Institute of Accountants, a Fellow of the Massachusetts Society of Certified Public Accountants, and a Certified Public Accountant of Massachusetts and New Hampshire. He has spoken at our international conferences and before several of our chapters on numerous occasions. He has been a contributor of technical articles for several issues of our Bulletin as well as to several magazines.

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FEBRUARY 15, 1935

A COST PLAN FOR THE WOMEN'S SHOE INDUSTRY

By Clinton W. Bennett, Manager, Cost Accounting Division, Cooley & Marvin, Boston, Mass.

THE women's shoe industry is one of the great traditional industries of the United States, with the result that it is highly mechanized. It is almost universally operated under craft unions, and it has made little real progress over a space of many years. Some one at this point will probably hop up and ask how I can reconcile the recent development of the so-called "cement process" of shoe manufacturing with this lack of progress statement. My reply is that, in my opinion, it is a very great question whether the introduction of the "cement process" represented real progress. I am inclined to believe that it is simply an innovation in an otherwise long and drab cycle of changeless years.

Now this traditional industry, like others of its type, notably the textile industry, has been extremely traditional in its cost accounting methods. For some unknown reason, the feeling seems to have grown and flourished in the industry that cost determination in a shoe factory is a particularly difficult and intricate matter and requires the services of an expert shoe man. Naturally, this attitude, coupled with the normal reluctance of the average member of any old line industry to adopt changing methods not directly coupled with the production activity, has retarded the proper development of satisfactory and adequate cost methods in the shoe industry generally, and in the women's shoe division in particular. During the current, well-advertised depression, the shoe industry has been, in at least one respect, singularly fortunate in that it has enjoyed a splendid volume of business. Using the *Annalist* index of business activity as a guide, we find that during the first nine months of 1934, general business fluctuated between 66% and 80% of normal, while during the same period the shoe business fluctuated between 93.5% and 130% of normal. While this index combines all types of shoe manufacturing, I believe the figures quoted would apply quite accurately to the women's division of this industry.

During this same period of high volume, strangely enough, there have been many failures. In addition, there have been large numbers of manufacturers who have hardly returned a new dollar for

an old one. I have personal knowledge of many specific instances in each category. The cause of this peculiar anomaly seems, fundamentally, to lie in the fact that there are too many shoe factories for what seems to be the normal demand for women's shoes. This in turn is brought about directly by the ease with which anyone can start in business manufacturing women's shoes. It is not unusual to find a manufacturer conducting a business doing an annual sales volume of half a million dollars on a $25,000 capital. Only today, I learned of a women's shoe manufacturer who has just compromised with his creditors and thus escaped "the wringer," who has raised new capital of $10,000 and is about to embark once more in the manufacturing business. The big buyers play these little manufacturers one against the other, with the result that the extremely smart and efficient ones make some money, the reasonably smart ones make a living and the ordinary ones go through the wringer and others take their places, ad infinitum.

The outcome of this unhealthy trade condition is that no industry generally is in greater need of accurate and dependable costs than is the women's shoe industry, and probably no industry as a whole has less in the way of really accurate cost information. Having been privileged to serve a fairly substantial number of manufacturers in this industry in a professional capacity over the past two decades, I am jotting down herewith some of the methods that I have found to be of greatest practical value. Furthermore, I am following the case method of presentation. The case I am using represents an actual installation in a women's shoe factory operating at an annual sales volume of about $400,000. I have deliberately chosen this particular case because it is in the size and volume class that furnishes the vast bulk of unfortunate and unintelligent competitors and, ultimately, failures. This field contains the "lunatic fringe." It must not be inferred that all manufacturers in this field are in the class above referred to. I have personal knowledge of many manufacturers in this group who enjoy successful operations year after year, but they are the roses among the thorns. Furthermore, a cost plan that is developed for and operated in a plant in this sales class can readily be expanded upward or contracted downward to fit any size of plant. Hence, my choice of the case in question as a medium for reflecting those simple methods of cost accounting and cost control that I have

found so effective and valuable. Accounting technicians can and probably will find many things about the plan with which they will take issue. Theoretically, they will probably be right. To those, I ask that they please remember that we are dealing with a business having a small clerical organization and a massed production volume that in its bulk is away out of proportion to the general size of a comparable business in most other industries. We must have practical results, even at the expense of technical niceties.

The General Plan

Having looked the business over and noted any local peculiarities that it may possess, the first step is that of developing the general plan of accounting control. Therefore, the chart of accounts shown in Form 1 will be prepared. This chart of general ledger accounts separates the accounts into their fundamental major classes, as follows:

1. Assets
2. Liabilities
3. Revenue and Expense

Next, these three basic classes are broken down into the following divisions:

1. Assets:
   - A. Current
   - B. Inventory
   - C. Fixed
   - D. Deferred
2. Liabilities:
   - E. Current
   - F. Cost Variances
   - G. Reserves
   - H. Capital
3. Revenue and Expense:
   - J. Sales, Deductions and Income
   - K. Direct Labor
   - L. Factory Burden
   - M. Commercial Burden

Let me repeat that the first step in developing the cost plan is that of preparing the chart of accounts. Without the chart of ac-

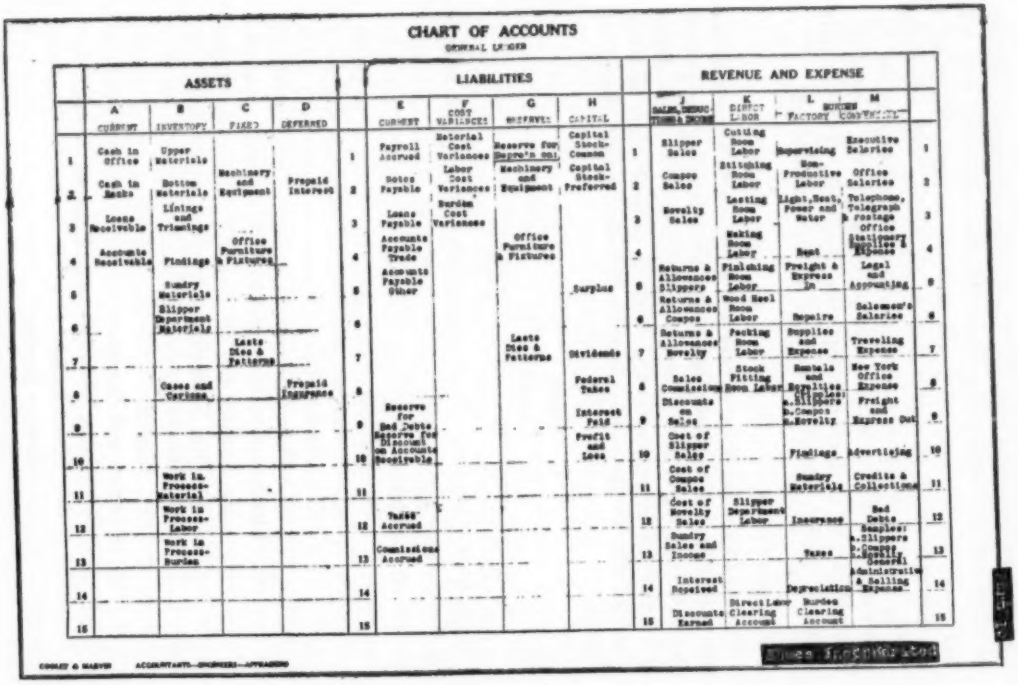


CHART OF ACCOUNTS

GENERAL LEDGER

	ASSETS					LIABILITIES					REVENUE AND EXPENSE				
	A CURRENT	B INVENTORY	C FIXED	D DEFERRED		E CURRENT	F COST VARIANCES	G RESERVES	H CAPITAL		J SALES, TRADE DISCOUNTS & INCOME	K DIRECT LABOR	L BURDEN — FACTORY	M BURDEN — CONVERTING	
1	Cash in Office	Upper Materials			1	Payroll Accrued	Material Cost Variances	Reserve for Depre'n on	Capital Stock-Common	1	Slipper Sales	Cutting Room Labor	Supervising	Executive Salaries	1
2	Cash in Banks	Bottom Materials	Machinery and Equipment	Prepaid Interest	2	Notes Payable	Labor Cost Variances	Machinery and Equipment	Capital Stock-Preferred	2	Compos Sales	Stitching Room Labor	Non-Productive Labor	Office Salaries	2
3	Loans Receivable	Linings and Trimmings			3	Loans Payable	Burden Cost Variances			3	Novelty Sales	Lasting Room Labor	Light, Heat, Power and Water	Telephone, Telegraph & Postage	3
4	Accounts Receivable	Findings	Office Furniture & Fixtures		4	Accounts Payable Trade		Office Furniture & Fixtures		4		Making Room Labor	Rent	Office Stationery Supplies & Expense	4
5		Sundry Materials			5	Accounts Payable Other			Surplus	5	Returns & Allowances Slippers	Finishing Room Labor	Freight & Express In	Legal and Appraising	5
6		Slipper Department Materials			6					6	Returns & Allowances Compos	Wood Heel Room Labor	Repairs	Salesmen's Salaries	6
7			Lasts Dies & Patterns		7			Lasts Dies & Patterns	Dividends	7	Returns & Allowances Novelty	Packing Room Labor	Supplies and Expense	Traveling Expense	7
8		Cases and Cartons		Prepaid Insurance	8				Federal Taxes	8	Sales Commissions	Stock Fitting Room Labor	Rentals and Royalties	New York Office Expense	8
9					9	Reserve for Bad Debts			Interest Paid	9	Discounts on Sales		Supplies: a.Slippers b.Compos c.Novelty	Freight and Express Out	9
10					10	Reserve for Discount on Accounts Receivable			Profit and Loss	10	Cost of Slipper Sales		Findings	Advertising	10
11		Work in Process-Material			11					11	Cost of Compos Sales		Sundry Materials	Credits & Collections	11
12		Work in Process-Labor			12	Taxes Accrued				12	Cost of Novelty Sales	Slipper Department Labor	Insurance	Bad Debts	12
13		Work in Process-Burden			13	Commissions Accrued				13	Sundry Sales and Income		Taxes	Samples: a.Slippers b.Compos c.Novelty	13
14					14					14	Interest Received		Depreciation	General Administrative & Selling Expense	14
15					15					15	Discounts Earned	Direct Labor Clearing Account	Burden Clearing Account		15

COOLEY & MARVIN — ACCOUNTANTS—ENGINEERS—ATTORNEYS

Sheet No. 1

FORM 1

counts, one cannot intelligently proceed with the development and installation of the cost methods. There would be much lost motion and back-tracking due to the absence of a completely thought through and coordinated central control plan by which the books of account and the factory and sales operations are dovetailed.

From our general study of the business, we have found that there are three main classes of sales:

1. Slippers
2. Compos
3. Novelties

Further, we found that while all three classes have a quite similar selling price, the slippers constituted only about 8% of the total output. The compos are shoes made by the cement process, while the novelties are McKay shoes, and both classes are so nearly uniform in price and in factory production flow that no breakdown in the cost control accounts for each will be made. However, separate sales accounts and cost of sales accounts will be carried for each of the three classes, while cost sheets will be set up for each individual style. We also found that no shoes are manufactured for stock. Before any shoes are cut, orders covering them must be on hand. This knowledge eliminates the need of a finished goods account. All sales are made by the company's own salesmen.

With these points cleared up, we are ready to decide upon the accounts to be carried for each of the three basic cost elements of material, labor and burden. In this particular case, the following accounts were used:

Material:

- Upper Materials
- Bottom Materials
- Linings and Trimmings
- Findings
- Sundry Materials
- Slipper Department Materials
- Cases and Cartons

Direct Labor:

- Cutting Room Labor
- Stitching Room Labor

Lasting Room Labor
Making Room Labor
Finishing Room Labor
Wood Heel Room Labor
Packing Room Labor
Stock Fitting Room Labor
Slipper Department Labor

Factory Burden:

Supervising
Non-Productive Labor
Light, Heat, Power and Water
Rent
Freight and Express In
Repairs
Supplies and Expense
Rentals and Royalties
Cripples:
a. Slippers
b. Compos
c. Novelty
Findings
Insurance
Taxes
Depreciation

Commercial Burden:

Executive Salaries
Office Salaries
Telephone, Telegraph and Postage
Office Stationery, Supplies and Expense
Legal and Accounting
Salesmen's Salaries
Traveling Expense
New York Office Expense
Freight and Express Out
Advertising
Credits and Collections
Bad Debts
Samples:

a. Slippers
b. Compos
c. Novelty

General Administrative and Selling Expense

In this particular plant, a distinction was made by the organization between findings and sundry materials, although usually both classes would be singly considered as findings. Cement, for example, was treated as sundry materials.

Three cost variance accounts are operated to control these detail expenditures and prove their absorption in the cost calculation figures. These variance accounts are:

1. Material Cost Variances
2. Labor Cost Variances
3. Burden Cost Variances

All materials used will be cleared monthly from the materials accounts as listed previously and as shown in column B of the chart of accounts to the Material Cost Variances account; all direct labor for the month will be cleared from the direct labor accounts, column K of the chart, to the Labor Cost Variances account, while all burden, both factory and commercial, will be cleared monthly from the burden accounts columns L and M to the Burden Cost Variances account. This procedure will leave the three variances accounts charged with the actual material, labor and burden consumed during the month. Next, the standard cost of material, labor and burden consumed during the same period will be cleared from the Material Cost Variances account to the Work-in-Process Material account; the standard cost of labor used will be cleared from the Labor Cost Variances account to the Work-in-Process labor account; the standard amount of factory burden absorbed will be cleared from the Burden Cost Variances account to the Work-in-Process burden account, while the standard amount of commercial burden absorbed will be cleared from the Burden Cost Variances account to the appropriate cost of sales accounts, J10, J11 and J12.

Next, the three work-in-process accounts will be cleared each month by transferring the standard material, labor and factory burden cost of goods sold from work-in-process to the appropriate cost of sales accounts, J10, J11 and J12.

In clearing direct labor and burden to the cost variances accounts, it should be emphasized that none of these accounts are closed monthly. All labor and burden accounts are allowed to accumulate their balances from month to month just the same as would be the case if commercial accounting alone were in use. Only at the end of the fiscal year will these accounts be closed. The labor and burden accounts should be cleared each month through the medium of the clearing accounts that are provided for each class on the chart of accounts. In this way, all the benefits of monthly closings are enjoyed without suffering any of the possible offsetting disadvantages.

When the steps just discussed have been completed, the material accounts B1 through B8 will set forth the cost of the inventory on hand at the end of the month; the work-in-process accounts will show by the three elements the standard cost of work in process at the end of the month; the variances accounts will show for each of the cost elements just how much the calculated costs varied from the actual costs for the month, while the cost of sales accounts will stand charged with the standard cost of shoes sold during the month as a direct comparison with the corresponding sales accounts.

The Cost Formula

Before proceeding to a discussion of the details of cost determination and development, it is necessary to decide upon the cost figuring formula. We must know what items shall be classified into each elemental cost division. In Form 2 herewith is presented an analysis of costs and profits. This shows not only the recommended separation of costs by elements, but in addition, it reflects the results that were encountered in an actual shoe factory when costs of the seven leaders in the line were calculated and the figures set up in accordance with the plan under description. In the case under review, costs and expenditures for cost figuring purposes were segregated into the following four major divisions:

1. Material Cost
2. Direct Labor Cost
3. Burden Cost
4. Deductions from Selling Price

SHOES INCORPORATED—ANALYSIS OF COSTS AND PROFITS

All Prices are Per Pair	*#3111 Plain Regent Pump*	*#3010 Fancy Pump*	*#364 Suede Oxford Pat. Trim & Heel*	*#3015 Reptile Tip & Fox Pump*	*#364 Reptile Saddle & Fox Oxford*	*#6821 Reptile Vamp & Eye Face*	*#6821 All Over Alligator Oxford*
Selling Price	$1.60	$1.70	$1.80	$2.00	$2.25	$2.50	$2.75
Deductions from Selling Price:							
Discount 7%	.112	.119	.126	.14	.1575	.175	.1925
Commission 3%	.048	.051	.054	.06	.0675	.075	.0825
Loss on Allowances 1%	.016	.017	.018	.02	.0225	.025	.0275
Total Deductions	.176	.187	.198	.22	.2475	.275	.3025
Net Selling Price	$1.424	$1.513	$1.602	$1.78	$2.0025	$2.225	$2.4475
Cost:							
Material Cost	$ .633	$. 665	$ .644	$ .925	$1.070	$1.205	$1.635
Findings, Cement and Cases	.109	.109	.109	.109	.109	.109	.109
Laces	.	.	.008	.	.008	.008	.008
Total Material Cost	.742	.774	.761	1.034	1.187	1.322	1.752
Direct Labor Cost	.393	.467	.540	.457	.530	.447	.447
Burden Cost—20 Cases per Day	.293	.293	.293	.293	.293	.293	.293
Total Cost	1.428	1.534	1.594	1.784	2.010	2.062	2.492
Net Loss	.004	.021		.004	.0075		.0445
Net Profit			.008			.163	
5% Profit	.08	.085	.09	.10	.1125	.125	.1375
Additional Profit Needed	$ .084	$ .106	$ .082	$ .104	$ .1200	$ .048*	$ .1820
Selling Price Should Be	$1.684	$1.806	$1.882	$2.104	$2.37	$2.452	$2.932

* Indicates a red figure.

FORM 2

In this instance, deductions from selling price included cash discounts, sales commissions and loss on allowances. The discounts averaged 7%, while the sales commissions averaged 3%. These items will vary in different concerns but in every instance it is essential that provision shall be made either as sales deductions or part of burden for the full average rate of discount and of commission based on the total selling price, if accurate cost results are to be had. If this is done, any reduction from these figures that may be enjoyed in specific instances will show up as profit. On the other hand, it has repeatedly been shown that these favorable exceptions to the rule are of rare occurrences and allowance for them usually constitutes a dangerous practice. Loss on allowances to customers is shown as 1% of the selling price. This figure should be determined by using the following formula:

Total sales returns	ooo	
Total allowances to customers	ooo	
Total Gross		ooo
Inventory value of returned shoes still on hand	ooo	
Sales of returned shoes less commercial burden rate	ooo	
Total Value		ooo
Net Loss from Returns and Allowances		ooo
Total Gross Sales (for same period)		ooo
Net Loss—% on Selling Price		ooo

Discounts, commissions and loss on allowances can be included in the burden if desired for purposes of greater simplicity and also as a means of making sure that these important elements will not be omitted in cost calculating. I use both methods, depending for my choice on local conditions. Technically, it probably is more correct accounting procedure to include these elements as sales deductions.

Material cost should include just what the name suggests. This will embrace, for example, upper leather, bottom leather and soles,

linings, trimmings, laces, cement, all findings, as well as boxes, labels, shipping cases and cartons. Every material that enters into the shoes will be included as part of material. Thus the burden will include no materials, with the exception of factory supplies in the correct sense of the term.

Direct labor cost will include all labor that directly enters into the production of the shoes. Contract work, for example, will be figured as direct labor. Here again, as in the case of direct material, the term "direct labor" means exactly what the term implies. This industry is unlike so many others in which the decision as to just what material and labor shall be treated as "direct" usually hinges upon the ease with which these particular elements can be included on the cost calculation sheet. No such problem exists in the women's shoe industry. Here, the great bulk of the total cost value of both materials and labor can be directly calculated, while those materials or those labor operations which do not readily lend themselves to direct application can easily be reduced to average per pair unit values. In some plants, the product is such that single per pair unit costs for these several elements will apply universally to all shoes produced, while in other plants these units will have to be graduated on a standard basis between the several basic classes of shoes.

Burden, therefore, will include every other cost of the business that is not included in material, labor or sales deductions, as defined herein. In the case under consideration, burden was applied as a single flat rate per pair of shoes, and included both factory and commercial overhead. It is not argued that either of these bases are correct in all factories. It is, however, my opinion that a single burden rate applied to costs on a flat rate per pair basis represents the most practical and feasible plan for the great bulk of plants in this industry.

Reverting to the analysis of costs and profits, Form 2 herewith, the first entry is the selling price. From this is deducted the discounts, commissions and loss on allowances to obtain the net selling price. Next are entered the three cost elements of material, labor and burden in that order, and the sum of these three will produce the total cost of a pair of shoes. Deducting this total cost from the net sales figure develops the net profit or the net loss. In the plant in question, 5% was adopted as the desired

profit factor, based of course on the gross selling price. This profit figure is the next one entered. Comparison of this desired profit with the net profit or loss reflects the figures to enter in the additional profit needed section. As a result, the correct selling price is obtained as the final figure.

In actual practice, this analysis of costs and profits is not prepared until the cost standards are developed for material, labor burden and sales deductions. It usually is a source of much anguish to the manufacturer. The data shown in Form 2 represents a condition not unusual in the shoe industry among the medium and small manufacturers. And since these are the ones who are producing the bulk of the goods, they are as a result exerting the greatest effect upon the industry and its price level. The general price situation in this industry is nothing short of chaotic, and ignorance of costs is at the bottom of it. Hence, the tremendous need for the universal education of these hordes of manufacturers in the field of cost consciousness. While this condition continues, capital is being wiped out and wasted, and those who toil are being either reduced in earning capacity or thrown out of work altogether, simply as the result of taking business at a price below the economic worth of the product. And while these hardships are being thrown on great masses of people, manufacturers and workers alike, no one gains any commensurate advantage. For example, Form 2 shows that only two out of the seven styles listed reflects any net profit and only one of these shows a profit of 5%. Yet what a small additional return is needed to make safe the jobs of the workers in this plant. In all but one instance, an increase of only from eight to twelve cents per pair of shoes should pay all costs and return a 5% profit, and in the case of the highest priced shoe, an increase of only eighteen cents is required. So I submit that differences of these small amounts mean absolutely nothing to the consumer in the price of a pair of shoes, yet they are vital to those engaged in their production.

Material Control

Column B of the chart of accounts, Form 1 herewith, sets forth the inventory accounts. The raw material accounts in the case under review follow:

B1. Upper Materials
B2. Bottom Materials
B3. Linings and Trimmings
B4. Findings
B5. Sundry Materials
B6. Slipper Department Materials
B8. Cases and Cartons

Each month, all of the material used will be priced at cost and an entry will be made, crediting the proper amounts to these seven material accounts B1 through B8, with an offsetting debit to F1, Material Cost Variances account. Next, the amount of material required on the basis of standard material allowances and priced at standard material prices will be credited to F1, Material Cost Variances, with an offsetting debit to B11, Work-in-Process Material account. Thus the raw material accounts B1 through B8 will reflect the inventory on hand at the end of the month at cost, while the differences that may exist between actual costs and quantities and standard prices and quantities will be set out in the material cost variances account. Furthermore, the material placed in process is charged thereto at standard prices and quantities and not at actual cost prices or quantities, unless perchance the actual figures happen to agree with the standards.

Two methods are in general use for obtaining these quantities of materials used each month. The first operates a stores plan and obtains material requisitions or material used reports for all material removed from the stock. The other method requires monthly raw material inventories. The best of the two is the one that will most satisfactorily operate in a given plant. In the case under review, the stores plan was used. Also, in this plant, those materials and findings that were not easily calculated in the cost of a pair of shoes and which totaled small amounts per pair were charged directly from inventory to factory burden, instead of to the material variances account and, consequently, to work in process. Hence the reason for accounts L10, Findings and L11, Sundry Materials among the burden accounts. Thread is an example of the type of findings charged to L10, Findings burden account, while blacking and leather cleaning materials

represent the type of materials charged to L11, Sundry Materials account. In many plants, however, all of these sundry materials and general findings are reduced to a flat per pair unit and accordingly included as a part of the direct material cost of each pair of shoes instead of as a part of the burden.

Labor Control.

As drawn, the payroll checks will be charged to E1, Payroll Accrued. Thus the debit of this account will reflect the actual payrolls paid during the month. At the close of the month, the actual payroll for the month, both paid and accrued, will be analyzed and summarized. The total will be credited to E1, Payroll Accrued, with offsetting debits for direct labor to the various direct labor accounts shown in column K of the chart of accounts, and to the appropriate burden accounts for the indirect labor. Thus the actual payroll for the month, both direct and indirect, will have been properly analyzed and distributed, and at the same time, the Payroll Accrued account will automatically show the exact amount of wages that have been earned but are not due or paid to the end of the month. Then also, at the end of the month, this total actual direct labor as collected in accounts K1 through K12 will be cleared through K15, Direct Labor Clearing account, with an offsetting debit to F2, Labor Cost Variances account. Next, the standard labor cost for the month will be calculated and credited to F2, Labor Cost Variances account, with an offsetting debit to B12, Work-in-Process Labor. Here, as in the case of material, the cost variance account will always show the difference in dollars and cents that may exist between the actual labor expended and the amount of this labor that has been absorbed in costs on the basis of cost standards. Furthermore, the actual direct labor is sufficiently broken down in the direct labor accounts K1 through K12 to allow for the development of necessary and valuable comparative labor cost statistics.

Burden Control.

The burden accounts are reflected in columns L and M of the chart of general ledger accounts. Care should be taken to make sure that all expenditures that arise only infrequently or just once a year, such for example, as insurance, taxes, deprecia-

tion, bad debts and other items of the same general category, are entered each month in the burden accounts provided, in their proper monthly proportions. Only in this way can the actual burden figures for the month represent reliable results.

It will be noted that the burden is divideded on the chart of accounts between factory burden and commercial burden, although both classes of burden are included in costs through the use of a single rate per pair of shoes. This division is maintained both for statistical and inventory costing purposes.

At the end of the month, the actual burden for the month, both factory and commercial, will be cleared through the Burden Clearing account, L15, with an offsetting debit to F3, Burden Cost Variances. Next, the amount of factory burden absorbed during the month will be credited to F3, Burden Cost Variances account, with a corresponding debit to B13, Work-in-Process Burden. At the same time, the amount of commercial burden absorbed during the month will be credited to F3, Burden Cost Variances account, with offsetting debits to the appropriate cost of sales accounts, J10, J11 and J12. Thus the burden cost variances account will set forth the amount of any difference existing between the actual burden for the month and the amount of burden absorbed at standard rates. It should be emphasized that while a single burden rate is used in this case, as a means of applying total burden to costs, only that portion of the standard rate which represents factory burden is allowed to find its way into the work in process and, consequently, into inventories. The amount of the standard rate which represents commercial burden is always charged to cost of sales.

Work in Process and Cost of Sales.

In the case under review, no finished goods account is operated. Consequently, at the end of the month, the shoes billed out are priced at standard material, labor and factory burden cost, and the total of each of these elements is credited to each of the three work in process accounts, with offsetting debits to the appropriate cost of sales accounts, J10, J11 and J12. Therefore, at the end of each month, the sum of the three work-in-process balances will set forth the standard cost of all goods placed in process but which have not been shipped. Also the three cost of sales accounts will

show the standard factory cost of all goods shipped, plus the standard cost of commercial expense.

At inventory periods, the raw materials accounts B1 through B8 will be priced at actual cost or market, whichever is the lower, while the work in process will be priced at standard cost or market, whichever is the lower. This corrects the illogical practice so prevalent in industry whereby material, labor and burden are charged into work in process at actual cost, while the inventory when priced will be priced at figured or estimated costs which may be very different from the actual costs. The plan reported upon herewith places the work-in-process charges, credits and inventory pricing on the same logical and uniform basis.

The Burden Budget

Almost every shoe factory insolvency of which I have had knowledge arose directly as the result of failure on the part of the management to accurately figure burden in the cost calculations. I know of no other industry in which there seems to exist such a wholesale desire on the part of manufacturers to delude themselves. The usual overhead figure is one that the executive used in some other factory with which he formerly was connected. And all this irrespective of the fact that the two factories may have had absolutely nothing in common. Furthermore, the two factories may be quite similar and yet have substantially different overhead costs due to price range, volume, salary range, sales methods and any number of other causes. Therefore, having determined upon the general plan of accounting and cost control and having set up the chart of general ledger accounts and the cost formula, the next step should be that of developing the burden budget. Form 3 herewith sets forth the burden budget developed for the plant in question.

Each of the expenses represented on this budget sheet will be found to correspond with the accounts shown in columns L and M of the chart of ledger accounts herewith. In setting up the budget, it is necessary to consider both the anticipated production and the planned-for expenditures. In almost all instances, I calculate production on the basis of 50 weeks of 5 days each, or 250 days per year, and that basis was accepted in this case. Also in this plant, the output was placed at 800 pairs per day, and the

SHOES, INCORPORATED
BURDEN BUDGET

	Basis—Estimated Output 800 Pair per day and 250 weeks of 5 days or 250 days = 200,000 pair per year. Total yearly sales @ $2.00 = $400,000.00	*For Year Ending*..... *Total Yearly Budget*
L1	Supervising	$ 7,409.00
L2	Non-Productive Labor	5,705.00
L3	Light, Heat, Power and Water	3,953.00
L4	Rent	932.00
L5	Freight and Express In	1,050.00
L6	Repairs	1,914.00
L7	Supplies and Expense	1,400.00
L8	Rentals and Royalties	6,000.00
L9	Cripples	1,471.00
L10	Findings	800.00
L11	Sundry Materials	1,000.00
L12	Insurance	1,009.00
L13	Taxes	350.00
L14	Depreciation	4,677.00
	Total Factory Burden	$37,670.00
M1	Executive Salaries	$5,578.00
M2	Office Salaries	2,500.00
M3	Telephone, Telegraph and Postage	525.00
M4	Office Stationery, Supplies and Expense	335.00
M5	Legal and Accounting	500.00
M6	Salesmen's Salaries	4,500.00
M7	Traveling Expense	1,400.00
M8	New York Office Expense	450.00
M9	Freight and Express Out	1,408.00
M10	Advertising	70.00
M11	Credits and Collections	500.00
M12	Bad Debts	1,000.00
M13	Samples	500.00
M14	General Administrative and Selling Expense	500.00
	Total Commercial Burden	$19,766.00
	Total Burden	$57,436.00
	No. Pair of Shoes	200,000
	Burden per Pair	$.287
	Burden Rate to Use	$.29

FORM 3

selling price was estimated at $2 per pair. Hence we have the budget production for the year totaling 200,000 pair, with gross sales of $400,000. We next proceed to a determination of the budget that will be necessary to produce these 200,000 pair of shoes. Having arrived at this budget as shown in Form 3, it simply becomes necessary to divide the budgeted number of pairs

of shoes into the budgeted burden to obtain the burden per pair to use in cost calculating, which, in this case, amounted to $.287 per pair. This means that after figuring in all material and direct labor cost, it is necessary to add twenty-nine cents to each pair of shoes to obtain the total cost per pair. In the case under review, the burden includes all costs of the business of every nature excepting direct material, direct labor and sales deductions. These latter deductions have been discussed elsewhere in this article and consist of sales commissions, cash discounts, provision for allowances to customers, and a 5% profit.

Not infrequently, I include all of these sale deductions, with the exception of the 5% profit, directly in burden. Under this plan, it is not necessary to regard sales deductions in determining per pair results; it is simply necessary to set down the material cost, the direct labor cost, add the burden per pair and the sum of the three represents the total cost per pair. This latter is the simpler method and is recommended in small and medium size shoe factories if the commissions and discounts run reasonably uniform. If, however, there are substantial differences in the rates allowed different customers and salesmen for these factors, they will have to be treated as sales deductions. This was the situation in the case under review, hence the method used.

Someone will probably arise in meeting and question the advisability of using a flat per pair rate for including burden in costs. I admit it is not wholly accurate but neither is any other practical plan of burden application that can be advanced. Experience has indicated that, in the average medium size women's shoe factory, a single burden rate to include both factory and commercial burden, and applied as a flat per pair rate, will prove extremely satisfactory from the standpoint of simplicity, and it will also be relatively accurate. Furthermore, it possesses the great advantage of lending itself readily to the plan of simple accounting control that is so essential in this industry. If the output is such that a wide price range of shoes are made, then the flat per pair burden plan will have to be abandoned in favor of the percentage of direct labor method. But in the usual "across the board" factory, the point to watch is that the material and labor costs are being accurately figured and that the burden rate is such that the output for the year will absorb the total expenses of every character over the same

period. And in this type of factory which appears to be greatly in the majority, the flat single burden rate per pair of shoes has much merit.

While treating with the burden budget, I would like to stress the point that of all the valuable features made possible to the shoe manufacturer by a modern simple plan of cost accounting the burden budget comes number one on the list. Many failures would not have arisen during the past few years if adequate burden information had been available. It is, of course, highly desirable to obtain continuous control and proof of costs, also monthly statements of operating results. These are most valuable. But the burden budget is fundamental. It simply means the difference between life and death to many a business. Therefore, if nothing else in the way of cost improvement can be accomplished, make sure that at least a burden budget is carefully developed. Eventually, the results will return to bless you.

Cost Calculating

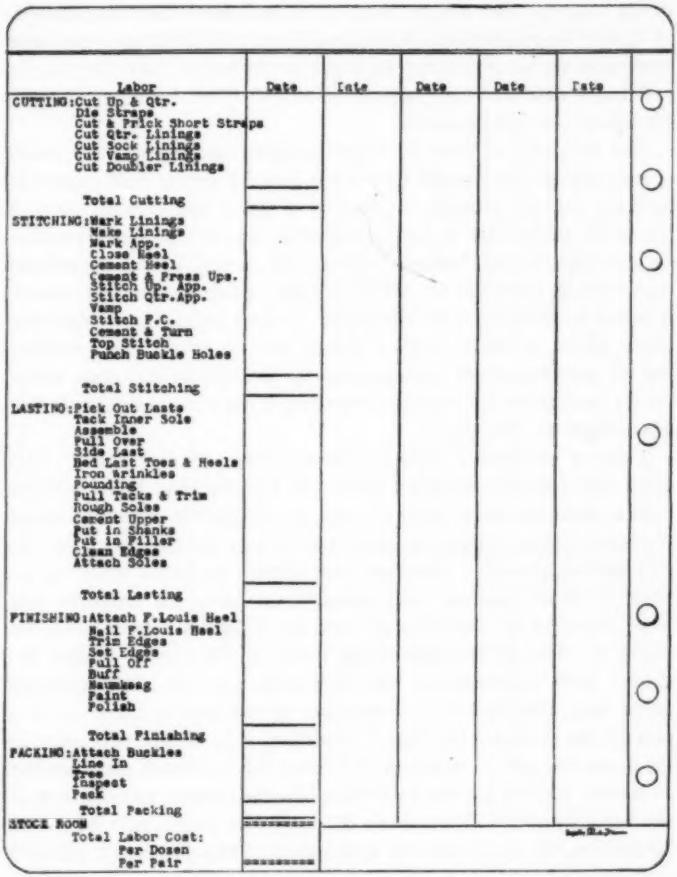
No attempt should be made to use job or special order costs in the women's shoe industry. Experience has amply demonstrated the fact that standard costs by styles should be developed for the line and then these standards should be continuously proved directly with actual expenditures, through the accounting control plan. Two representative cost sheets are shown in Forms 4 and 5 herewith. Each has been designed to meet certain local conditions and naturally neither should be adopted in any specific plant without conducting a sufficiently exhaustive study of the problem to make sure that changes ought not to be made in some phases of the set-up. However, these two forms are shown because each represents an approach from a somewhat different angle. Form 4 front, provides space for the calculation of the material cost and for the tabulation of all the final cost results, ending with the anticipated selling price and the calculated profit. In the rear of Form 4 will be calculated the labor cost details. This labor cost is carried as a total figure to the proper space on the front of the sheet. After arriving at the total material, labor and burden cost on the front of Form 4, the selling price is next inserted. From this selling price is deducted the sum of the commission, discount, allowances and predetermined profit factor to arrive at the net

Description _____ SHOES INCORPORATED COST SHEET Sample No._____ Pattern No._____

Material	Date	Date	Date	Date	Date
CUTTING ROOM:					
Faille yds. @					
Straps Ft. @					
Linings Ft. @					
Twill yds. @					
Doubler yds. @					
Total Cutting Room					
STITCHING ROOM:					
French Cord Gr. @					
Total Stitching Room					
LASTING ROOM:					
Filler					
Counters					
Shanks					
Cement					
Box Toe					
Inner Sole					
Heels					
Soles					
Total Lasting Room					
CASES AND CARTONS					
Total Material Cost					
Per Dozen					
Per Pair					
Total Labor Cost					
Burden ___% Pr.					
Total Cost					
Selling Price					
Less: Commission ___%					
Discount ___%					
Allowances ___%					
Profit ___%					
Total Sales Deductions					
Net Selling Price					
Profit					

FORM 4

selling price. Deducting the total material, labor and burden cost from this selling price shows the resulting profit as a final figure. In preparing the burden budget for this case, both commissions and cash discounts were omitted therefrom because both were such variable factors. Therefore, both commissions and discounts were



Labor	Date	Rate	Date	Date	Rate	
CUTTING: Cut Up & Qtr.						○
Die Straps						
Cut & Prick Short Straps						
Cut Qtr. Linings						
Cut Sock Linings						
Cut Vamp Linings						
Cut Doubler Linings						○
Total Cutting						
STITCHING: Mark Linings						
Make Linings						
Mark App.						
Close Heel						○
Cement Heel						
Cement & Press Ups.						
Stitch Up. App.						
Stitch Qtr. App.						
Vamp						
Stitch F.C.						
Cement & Turn						
Top Stitch						
Punch Buckle Holes						
Total Stitching						
LASTING: Pick Out Lasts						
Tack Inner Sole						
Assemble						
Pull Over						○
Side Last						
Bed Last Toes & Heels						
Iron Wrinkles						
Pounding						
Pull Tacks & Trim						
Rough Soles						
Cement Upper						
Put in Shanks						
Put in Filler						
Clean Edges						
Attach Soles						
Total Lasting						
FINISHING: Attach F.Louis Heel						○
Nail F.Louis Heel						
Trim Edges						
Set Edges						
Pull Off						
Buff						
Naumkeag						○
Paint						
Polish						
Total Finishing						
PACKING: Attach Buckles						
Line In						
Tree						○
Inspect						
Pack						
Total Packing						
STOCK ROOM	==========					
Total Labor Cost:						
Per Dozen						
Per Pair	==========					

FORM 4 (REVERSE)

treated as deductions from the selling price. Also in this case, loss due to customers' returns and allowances were deducted at 1% of the gross selling price, while 5% of the gross selling price was deducted for predetermined profit. The burden budget, therefore, was intended to include every cost of doing business other than

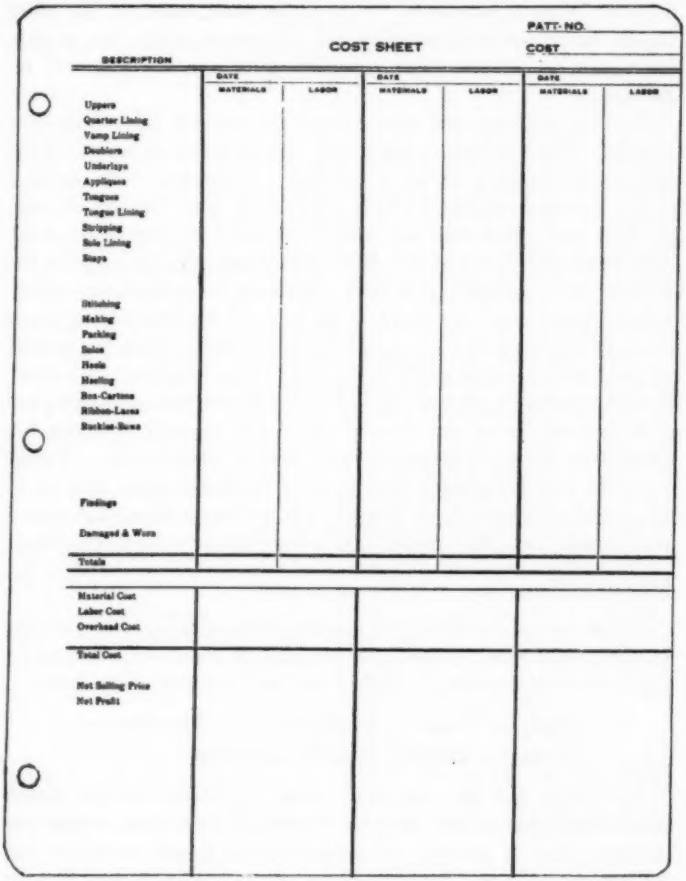
direct material and direct labor costs and these sales deductions. It should be emphasized that all costs are calculated on a per pair basis and not on a per case or a per dozen basis. Any per case or per dozen data that may appear on any of these forms are simply statistical, not fundamental.

The inclusion in costs of a 5% predetermined profit has much to recommend it, although I have not found it economically possible to carry out the practice to the extent that I would wish. It is a factor of safety that is highly desirable, and it also has a psychological angle in that because it is treated as part of the deductions that must be provided for before the final profit can be determined, it seems to strengthen the backbone of many executives in exerting every effort to obtain higher prices for the shoes. This method has all the advantages possessed by the practice of including interest on investment as a part of cost and it does not possess the disadvantages of that plan.

Form 5 presents a rather different form of cost sheet. This sheet lists the classifications down the left side and then provides both a material and a labor column at the right in which to insert the cost of each of these elements for each of the classifications. In this particular case, "damaged and worn" provides space to include as direct material and direct labor costs, the elements that were included as "allowances" among deductions from sales on Form 4. Also in the case using Form 5, the burden budget included both commissions and discounts and no predetermined profit was provided for. Therefore, in calculating the cost of a pair of shoes under this latter condition, it is simply necessary to set down the cost of material and direct labor in each classification as shown, add the burden as reflected by the budget, and the sum of the three figures will set forth the total cost of the pair of shoes. Deducting this cost from the anticipated selling price, will produce the expected profit.

From the information illustrated on these two forms, 4 and 5, it should be possible to develop a cost sheet to adequately fit the local problems of any women's shoe factory.

It will be noted that space has been provided on each of these forms in which to refigure the cost of all items several times. Costs when once set up should not be refigured for minor fluctuations in material or labor, because these swings will always be



COST SHEET

PATT. NO.

COST

DESCRIPTION	DATE		DATE		DATE	
	MATERIALS	LABOR	MATERIALS	LABOR	MATERIALS	LABOR
Uppers						
Quarter Lining						
Vamp Lining						
Doublers						
Underlays						
Appliques						
Tongues						
Tongue Lining						
Stripping						
Sole Lining						
Stays						
Stitching						
Making						
Packing						
Soles						
Heels						
Heeling						
Box-Cartons						
Ribbon-Laces						
Buckles-Bows						
Findings						
Damaged & Worn						
Totals						
Material Cost						
Labor Cost						
Overhead Cost						
Total Cost						
Net Selling Price						
Net Profit						

FORM 5

taking place and if the costs as set up on the cost sheets have been properly determined, they should be reflective of fair averages. Furthermore, the monthly accounting control will always show up the extent of the material, labor and burden variances so that the amount of all of these price and cost swings will be very definitely

known. When fundamental changes take place, however, the costs should be recalculated on the shoes affected in order that a misconception of the cost and resulting profit on any line will be avoided.

Nothing has been said herein about the physical control of production. This omission is intentional. No industry of which I have knowledge has gone as far in intelligent production order control as has the shoe industry. I have yet to see a shoe factory, no matter how small, that does not operate an elaborate system of order tags which are issued at the office. These tags contain coupons reflecting the operations and other necessary manufacturing information and follow the shoes at all times from the cutting room through the shipping room and back to the office. This tag system of production control would be considered the height of "red tape" in most plants of comparable size in other old line industries, but it is a tradition of the shoe industry and as such is taken for granted by the manufacturers as one of the things to do. Therefore, the cost accountant need give no particular consideration to this phase of the problem. His job is to get the cost-calculating and cost-control methods developed to a comparable state of efficiency.

Monthly Statements

While the plan of accounting under review will lend itself readily to the preparation of much in the way of monthly information, there are two statements which I consider essential. These are:

Form 6. Monthly Profit and Loss Statement
Form 7. Monthly Burden Statement

The profit and loss statement contains columns for the month and for the year to date, with the result that a constant comparison of each class of income and expense from month to month can be had, in addition, the cumulative amount of each item for the year is shown. All of the entries on this statement will be obtained from the accounts shown by columns J, F and H of the chart of accounts. From the sales are subtracted the sales deductions to obtain the net sales. Next is inserted the cost of sales. This figure will represent the total cost of all shoes billed as tabulated from the standard cost sheets. Subtracting this total cost of sales from the net sales will reflect the standard operating profit. Next will

SHOES INCORPOLATED
MONTHLY PROFIT AND LOSS STATEMENT

		August		September	
		Month	To Date	Month	To Date
	SALES:				
J1	Slipper Sales				
J2	Compos Sales				
J3	Novelty Sales				
	Total Sales				
	DEDUCTIONS:				
J5	Returns & Allow.-Slippers				
J6	" " -Compos				
J7	" " -Novelty				
J8	Sales Commissions				
J9	Discount on Sales				
	Total Deductions				
	Net Sales				
	COST OF SALES:				
J10	Cost of Slipper Sales				
J11	Cost of Compos Sales				
J12	Cost of Novelty Sales				
	Total Cost of Sales				
	Standard Operating Profit				
	COST VARIANCES:				
F1	Mat'l Cost Variances				
F2	Labor Cost Variances				
F3	Burden Cost Variances				
	Total Cost Variances				
	Actual Operating Profit				
	OTHER INCOME:				
J13	Sundry Sales & Income				
J14	Interest Received				
J15	Discounts Earned				
	Total Other Income				
	Operating Profit and Other Income				
	OTHER CHARGES:				
H9	Interest Paid				
	Net Profit-Amount				
	Net Profit-% on Sales				

FORM 6

be entered the cost variances as shown by accounts F1, F2 and F3 of the chart of accounts. Adding the sum of these variances to, or deducting it from, the standard operating profit will produce the actual operating profit. Other income and charges are then inserted in order to arrive at the net profit.

SHOES, INCORPORATED
MONTHLY BURDEN STATEMENT

		August		September	
		Month	To Date	Month	To Date
	FACTORY:				
L1	Supervising				
L2	Non-Productive Labor				
L3	Light, Heat, Power & Water				
L4	Rent				
L5	Freight & Express In				
L6	Repairs				
L7	Supplies and Expense				
L8	Rentals and Royalties				
L9a	Cripples-Slippers				
b	-Compos				
c	-Novelty				
L10	Findings				
L11	Sundry Materials				
L12	Insurance				
L13	Taxes				
L14	Depreciation				
	Total Factory				
	COMMERCIAL:				
M1	Executive Salaries				
M2	Office Salaries				
M3	Telephone, Telegraph and Postage				
M4	Office Stationery, Supplies and Expense				
M5	Legal and Accounting				
M6	Salesmen's Salaries				
M7	Traveling Expense				
M8	New York Office Expense				
M9	Freight and Express Out				
M10	Advertising				
M11	Credits & Collections				
M12	Bad Debts				
M13a	Samples-Slippers				
b	-Compos				
c	-Novelty				
M14	Genl. Adm. & Sell. Exp.				
	Total Commercial				
	Total Burden				
	No. of Pair Produced				
	Burden Rate Per Pair-Actual				
	-Budget				
	Total Sales				
	Burden % to Sales				

FORM 7

It is thus seen that from this simple statement of profit and loss the executive can know the amount of profit that should have been made, the profit that was actually made and the reasons for the differences between the two figures.

The form of profit and loss statement shown in Form 6 was used

in the plant in which Form 4 cost sheet was also used. Interest paid in this instance was simply treated as another charge and not included in burden because it was so trivial that it was substantially exceeded by the interest received. In the plant using cost sheet Form 5, interest paid was included in the burden budget.

The monthly burden statement Form 7 is prepared from the accounts shown in columns L and M of the chart of accounts. As in the case of the profit and loss statement, all items on the burden statement are comparative, both from month to month and for the year to date. This burden statement contains the identical account names that are reflected on the burden budget and shows just how the actual burden is comparing with the budget, both for individual expense items and for the final burden rate. Thus monthly fluctuations in the actual burden rate as contrasted with the budgeted rate can quickly be accounted for by examining the individual items of expense in conjunction with the production for the month.

In addition to the profit and loss statement and the burden statement, some executives desire a monthly balance sheet. This can readily be prepared from the accounts contained in columns A through H of the chart of accounts, plus the final profit or loss shown by the profit and loss statement. When the accounting work for the month has been completed, preparation of the balance sheet merely involves the clerical work incident to copying the balances shown by each of these accounts from the ledger to the balance sheet form. This latter can also be set up in columnar form for monthly and cumulative comparison if desired.

The plan of cost accounting and cost control described briefly herein will not make a successful shoe manufacturer out of a failure. But it should when properly used, make a good manufacturer better, and it also should materially help to keep the great army of fair manufacturers from becoming failures. It provides the essential machinery to aid the manufacturer in leading his business instead of following it—a condition that is unfortunately too prevalent in the industry.

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